

Calendar

FEBRUARY

17-18 7th Annual Michigan Airport Conference, sponsored by the Michigan Association of Airport Executives and the MDOT- Bureau of Aeronautics. Holiday Inn South, Lansing, Michigan. Registration fee - \$125. Call 517/335-9958.

Dawn Patrols and Aviation Calendar

If your organization or club is planning a Dawn Patrol or an event you wish to have published, please call the Bureau of Aeronautics at 517/335-9915 by February 15, 1998. Information needed for publication includes: Date of Event, Associated City/Airport Name, comments or associated event, sponsoring organization, contact person, also contact person's telephone number. If you would prefer, this information may be sent to: Calendar, Michigan Aviation, Bureau of Aeronautics, 2700 E. Airport Service Drive, Lansing, Michigan 48906-2160 or e-mail to riffelr@mdot.state.mi.us.

John Engler, Governor

MICHIGAN AERONAUTICS COMMISSION

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Michigan Aeronautics Commission

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MDOT Specialized Technology/Graphics - Graphic Design

1998



International Aviation Art Contest

Young artists from across Michigan are invited to enter the 1998 International Aviation Art Contest. Sponsored at the state level by the Michigan Department of Transportation, Bureau of Aeronautics, the contest seeks to encourage young people to become familiar with the many facets of aviation and aeronautics. Other sponsors include the National Aeronautic Association, the National Association of State Aviation Officials, the Federal Aviation Administration, and the Fédération Aéronautique Internationale.

The theme for this year's contest is to create a poster for "Air Sports in the Olympics." Competition is open to students age 6-17 and will be judged in three separate age categories, with first, second, and third place winners selected in each. First-place winners in each category will advance to the national competition in Washington, D.C. National winners will compete with entries from other nations in late spring. For the first time, the contest this year will feature a separate competition for computer-generated art. Computer art will be judged only at the state and national levels.

Entries must be received by February 6, 1998. For a copy of the contest brochure, which includes contest rules and an entry form, please write to Michigan Bureau of Aeronautics, Attn: Aviation Art Contest, 2700 E. Airport Service Dr., Lansing, Michigan 48906, or call 517-335-9977. Complete contest details are also available on the Bureau of Aeronautics web site at: <http://www.mdot.state.mi.us/aero/>.

MICHIGAN Aviation



OFFICIAL PUBLICATION, BUREAU OF AERONAUTICS, DEPARTMENT OF TRANSPORTATION

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BULK RATE

U.S. POSTAGE

PAID

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Winter Is Just Around The Corner

See page 4



COMMISSION ACTION

In their final meeting of 1997, members of the Michigan Aeronautics Commission (MAC) met on November 12, 1997 in Lansing. Among agenda items addressed was approval of funding totaling \$40.8 million for 10 airport improvement projects across the state. Some projects have federal, state, and local funding, while others are funded from state and/or local sources alone. Commission approval for federally funded projects authorizes state participation, subject to issuance of a federal grant. Federal and state dollars for airport development are primarily from restricted, user generated funds. The primary sources of revenue are aviation fuel and passenger taxes, as well as aircraft registration fees.

Following are approved projects:

GRANTS

CLARE

Clare Municipal Airport - an allocation of \$1,800,000 to construct a new runway, including connecting taxiway and apron and to install a new windcone, segmented circle, and rotating beacon. The proposed budget consists of \$1,620,000 federal, \$90,000 state, and \$90,000 local funds.

DETROIT

Detroit Metropolitan Wayne County International Airport - an allocation of \$26,000,000 for noise mitigation and continuing funding for an ongoing letter of intent. The proposed budget consists of \$20,000,000 federal and \$6,000,000 local funds.

FLINT

Bishop International Airport - an allocation of \$7,000,000 to rehabilitate Runway 18/36 and parallel taxiway and to improve the Runway 18 safety area. The proposed budget consists

of \$6,300,000 federal, \$350,000 state, and \$350,000 local funds.

HANCOCK

Houghton County Memorial Airport - an allocation of \$300,000 to construct an electrical system vault and for snow removal equipment acquisition. The proposed budget consists of \$270,000 federal, \$15,000 state, and \$15,000 local funds.

LANSING

Capital City Airport - an allocation of \$4,000,000 to rehabilitate Runway 10R/28L and Taxiway B. The proposed budget consists of \$3,600,000 federal, \$200,000 state, and \$200,000 local funds.

MACKINAC ISLAND

Mackinac Island Airport - an allocation of \$25,000 to replace the terminal building roof. The proposed budget consists entirely of state funds.

MANISTEE

Manistee County - Blacker Airport - an allocation of \$200,000 for design engineering work for construction of

a new runway. The proposed budget consists of \$180,000 state and \$20,000 local funds.

ST. IGNACE

Mackinac County Airport - an allocation of \$1,000,000 to construct a parallel taxiway and to expand the terminal apron. The proposed budget consists of \$900,000 state and \$100,000 local funds.

SAULT STE. MARIE

Chippewa County International Airport - an allocation of \$350,000 for demolition of old Air Force hangars and design engineering work for construction of a new runway. The proposed budget consists of \$315,000 federal, \$17,500 state, and \$17,500 local funds.

WEST BRANCH

West Branch Municipal Airport - an allocation of \$60,000 for design engineering work for rehabilitation of the runway. The proposed budget consists of \$54,000 federal, \$3,000 state, and \$3,000 local funds.

1998 AERONAUTICS COMMISSION MEETING SCHEDULE

January 14, 1998	Lansing
March 26, 1998	Lansing *
May 13, 1998	Mt. Clemens
July 22, 1998	Traverse City
September 16, 1998	Grand Rapids
November 4, 1998	Lansing

All Lansing meetings begin at 10:00 a.m. in the Bureau of Aeronautics building at Capital City Airport. Details of out-of-town meetings will be published in *Michigan Aviation*. For information about meeting locations, agendas, minutes, or other details please call the Executive Assistant to the Commission at 517/335-9943. All meetings are open to the public.

*(Joint meeting with State Transportation Commission)



DIRECTOR'S DESK

William E. Gehman

Director, Michigan Aeronautics Commission

As 1997 draws to a close, I have allowed myself the luxury of a few minutes to reflect on what has indeed been a landmark year at the Bureau of Aeronautics. It has been a year full of many challenges as well as opportunities. Along with much of state government, the Department of Transportation underwent a major reorganization and downsizing, which coincided with an early retirement program. At the Bureau of Aeronautics, several employees took advantage of the program and opted to retire. Currently, our staff is reduced 25% from as recently as six years ago. Simultaneously, our organization has been restructured from three to two separate divisions. We're confident this new organization will more efficiently allow us to provide our customers with the high level of service to which they have become accustomed.

Despite the many changes, 1997 was a banner year, full of many accomplishments and successes. I am very proud of our staff and the many services and products they provide to users of Michigan's air transportation system. In the following paragraphs I have mentioned some of the highlights.

AIRPORT IMPROVEMENTS AND SERVICES

Airport improvement projects for fiscal 1997 provided many safety and convenience enhancements. Total funding was approximately \$75 million, of which \$12 million was in state money. Michigan is in its fifth year

as one of nine "block grant" states. This designation allows the Michigan Aeronautics Commission (MAC) to directly distribute federal funds at certain airports. Our block grant in fiscal 1997 was \$12 million, the second highest ever.

Grants were issued for 114 different projects in 1997. The largest recipient of funding was Detroit Metropolitan Wayne County Airport, which is in the midst of a multi-year project that will culminate with a new mid-field terminal complex, and a fourth parallel runway. Other major projects included a new crosswind runway and Instrument Landing System (ILS) at Grand Rapids, a longer crosswind runway at Escanaba, and a new freight ramp at Lansing. Planning is underway to move the existing Marquette County Airport to the recently closed K.I. Sawyer Air Force Base. General aviation airports also received major improvements. A new ILS was installed at Gaylord, runways were extended at Newberry and Frankfort, planning was finalized for a runway extension at St. Ignace, the general aviation terminal at Pellston was remodeled, at Harbor Springs the runway was widened and Precision Approach Path Indicators were installed, and at Sault Ste. Marie, Sanderson Field, the runway was completely reconstructed.

This summer, the nation's first federally-funded mobile fire and rescue training simulator was delivered to the Great Lakes Fire Training Institute at Kellogg Community College in Battle Creek. The simulator, which was built to specifications of and under the supervision of the Bureau of Aeronautics, will provide airport rescue personnel in Michigan and other Great Lakes states realistic training in a variety of emergency scenarios.

Preservation of airports is one of the Michigan Aeronautics Commission's highest priorities. This program seeks to not only protect and rescue airports at risk of imminent closure, but to prevent potential problems from escalating by working with sponsors and airport support groups to educate the pub-

lic about benefits of aviation to their communities. This past year we have partnered with local sponsors and airport advocates at Frankfort and Lapeer to assist in the formation of airport authorities at these airports. Formation of an airport authority can be an effective way to ensure the long term stability of a local airport. We have also worked with various airports in southeast Michigan to help preserve access to many of the communities in the area. Additionally, Bureau staff have worked on issues relating to land use zoning, formation of local airport advocacy groups, and encouraged pilots to become more involved in the decision making process on issues relating to airports. Local participation by pilots is crucial to the success of these preservation efforts. Finally, two video presentations were produced by MAC. Flight Plan for Tomorrow outlines the many economic, safety, and quality of life benefits of general aviation to local communities; Have You Ever Seen a Lobster Fly? is a highly entertaining look at the many positive ways aviation affects Michigan's economy.

ALL WEATHER ACCESS

Automated Weather Observing Systems (AWOS) were commissioned at three airports in 1997, bringing the total state-owned facilities to eighteen. Data collected from AWOS observations is disseminated nationally through a state-funded satellite uplink. Eight new pilot information centers were installed, and existing systems at 28 airports were upgraded with state-of-the-art technology. The new "WeatherMation IV" systems feature greatly enhanced graphics and flight planning capability.

A perennial complication for pilots at remote airports is obtaining an instrument clearance when weather is not suitable for departure under visual flight rules. Since the high cost of traditional Remote Communication Outlets (RCOs) makes

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AIRCRAFT WINTER STORAGE

By Patrick Benton and Robert Aardema

Many pilots reluctantly put away their pride and joy for the winter months here in the cold country. The worst part about this is not the separation anxiety, nor the prospect of no flying for a few months but the fear that when you return to the hangar in the spring, the plane will have flattened tires, rusted metal, and a dead

battery. However, with a little preparation and some common sense, you can keep your aircraft in good condition throughout the winter months. As you prepare to store your airplane, the main thing to keep in mind is that many of the problems that occur are the result of corrosion. Since moisture and corrosion go hand-in-hand, the trick is to keep things protected from the moisture. This is difficult because, in the winter months, all parts of the plane get "cold soaked." When moist air that is warmer than

the cold airplane comes along, suddenly condensation creates a rain forest in the engine, fuel tanks, electrical switches and everywhere else. There are some things you can do that will help keep your plane from harm. The engine is always one of the biggest questions. Should I "pickle it," run it occasionally, or what? Most engine manufacturers have service bulletins describing procedures to reduce corrosion in inactive engines. Ask your maintenance facility for information on the flyable storage, temporary storage, or indefinite storage programs listed under Teledyne Continental Motors Service Bulletin M91-5 or the Textron Lycoming Service Letter L180A for specific recommendations. The thinking on that question is varied, but a rule of thumb for ground running is to run the engine only at moderate power (1000 RPM) and only until the cylinder head temperature reaches the bottom of the green arc. If you don't have a cylinder head temperature gauge you should limit ground running to not more than ten minutes.

The problem is that this warm-up may be doing more harm than good. While running the engine reapplies the protective oil film to the engine parts, the oil is contaminated with condensed water. A short run up time, (10 minutes) isn't long enough to dry out the oil, so more condensation is generated and the oil just becomes more contaminated. Unless you can run the engine long enough to vaporize all the moisture in the oil, (i.e.: fly the plane) you are probably better off not running it at all. If you plan to not run the engine, moisture control "sparkplugs" may be inserted in the spark plug hole to control moisture. So what should you do to prepare your



Cooper of Cooper Aviation installing a battery heater on a Cessna Skyhawk to prepare it for easier winter starts

engine for storage? First, change the oil prior to storage. Clean oil will protect and adhere to engine parts better than dirty oil. Next, get some oil on the cylinder walls. One way of doing this is to spray an ounce of oil into the spark plug holes and rotate the propeller four complete revolutions. Use lightweight preservative oil such as Marvel Mystery oil. Then position the crankshaft so that all pistons are in the middle of the cylinder. Spray one more ounce into the spark plug hole and reinstall the plug. After this, do not rotate the engine again until you're removing the plane from storage. When that glorious day arrives, remove the lower spark plug and rotate the engine through several revolutions to remove the oil from the cylinder. The best place to store the plane is of course indoors (heated would be nice). But if you must keep it outdoors, proper mooring is essential. Be sure that the ground anchors are secure and capable of holding the aircraft. Attach tie ropes to the wing tie-down rings and secure to the ground anchors. On the tail, tie

The alternative to the storage plan is to fly the aircraft once or twice a month for approximately 30 minutes each flight. Some of the best flying conditions can be found during winter months.

the center of a rope to the tie down ring (or tail wheel) and pull the rope out 45 degrees on either side of the fuselage. This provides a more secure tail tie down than a single point anchor. If part of the engine mount is accessible from the underside of the cowl, tie a rope or strap (no chains) around it and secure it to a ground anchor.

The control lock on the pilot's wheel is OK, but for outdoor storage we recommend buying or making control surface locks for the ailerons and rudder. This will protect against treacherous wind gusts. Pull the elevators all the way back and tie the control wheel with the seat belt. Window covers should be used to protect windows from harmful rays of the sun and to shield the interior from fading and discoloration.

Try to wash and wax the plane before

putting it into storage. Cover all openings such as the pitot tube, static port, engine cowl openings, air vents and exhaust pipes. This will keep unwanted tenants from setting up housekeeping in your plane. Use your ingenuity to make covers but don't use masking tape. This stuff dries on the surface and is hard to clean off and will probably take some paint off with it.

With lack of use, tires can take a set (get flat in one spot). To avoid this you should rotate them 45 degrees every few weeks. Also, be sure that they are properly inflated. A low tire is hard on the sidewalls and can cause cracking. If you are unlucky enough to get a flat over the winter, don't think, "I might as well wait until spring to fix it." If you do, be sure to buy a new tire and bring it with you when you come in the spring. Use some tire preservative such as Armor All to keep the tires' sidewalls from drying out and cracking.

Remove the battery and store it in a spot where it won't be exposed to extreme cold temperature and will stay dry. Be sure your spot is well ventilated. Lubricate the control surface hinges and rods and anything else that's exposed and moves. This will not only lubricate, but will displace moisture and thereby prevent corrosion. Modern silicone based spray lubricants are good for this. If you plan to do any painting, keep the silicone off of the surfaces to be painted, since it will not allow the paint to adhere very well and is hard to remove. Finally, keep the fuel tanks as full as possible. This reduces the amount of moisture that can accumulate.

It is very important to remember everything you've done to prepare the plane for storage. To help, make a checklist of everything you do and use it in the spring to prepare the plane for flight. Winter storage doesn't have to be filled with anxiety. In fact, it can be sort of fun preparing your plane for a long winter's rest.

John Larsen of New Hudson Aviation Services prepares a Skymaster for the winter months



Patrick Benton and Robert Aardema are professors at Western Michigan University in the School Of Aviation Sciences. They teach courses in aircraft powerplants, airframes, and systems in the Aviation Maintenance programs at WMU. They hold A & P licenses, and flight ratings and have numerous years of experience in aircraft maintenance.

widespread installation impractical, pilots must obtain clearances over the telephone. In order to improve this vital communication link between pilots and air traffic controllers, Michigan has become one of the first states to begin installing "Auto-Dialing Remote Communication Outlets." These low-cost systems, which are activated by a series of microphone clicks, provide direct communication with the appropriate air traffic facility or flight service station. Two systems, at Oakland Troy and Howell, are operating. Five more, at Bellaire-Antrim County, Cadillac, Grosse Ile, Midland-Barstow, and Saginaw-Browne, will be in operation by early 1998. Additional installations are planned for later in the year.

AIRCRAFT REGISTRATION

Michigan's aircraft registration procedure was modified this year in response to comments and suggestions received from aircraft owners. The registration period now coincides with the calendar year and all registrations expire on December 31 each year. Additionally, the registration sticker has been eliminated.

AIRPORT INSPECTIONS

Of Michigan's 244 public-use airports, all but nineteen are inspected annually by Bureau inspectors. The remainder, which are air carrier airports, are inspected federally. This year, the process for inspecting airports was reviewed in depth and changes were implemented to increase efficiency and accuracy during data collection. Changes to the process include allowing inspectors to issue airport and manager licenses on-site upon completion of an inspection. Additionally, airport licensing categories have been simplified. The old A, B, C, and D classification has been replaced by three new licensing categories: Basic Utility, General Utility, and Air Carrier.

SAFETY & EDUCATION PROGRAMS AND PUBLICATIONS

Pilot safety seminars continue to be an important part of our overall commitment to promoting safety.

Forty seminars were conducted throughout the state, with total attendance in excess of 4100 pilots. Our annual spring teacher workshop strives to show teachers how aviation concepts can be incorporated in many different classroom subjects. This year nearly 100 teachers participated. Over 500 young people submitted entries for the state competition of the annual international aviation art contest.

The aeronautical chart and airport directory continue to be among the finest state publications of their type in the nation. The process for editing and publishing has been refined and more highly automated, and will result in a more timely and accurate product.

Like many other organizations, the Bureau of Aeronautics has entered the world of cyberspace. Our site on the World Wide Web (www.mdot.mi.us/aero/) provides access to many of our services and publications, as well as a convenient means for our customers to communicate with us.

AIR SERVICE

The Air Service Program for fiscal 1997 received \$1 million in appropriated funds for projects at Michigan's commercial service airports. Promotion of Michigan's community airports through enhancements of facilities and increased passenger service (accomplished in partnership with local communities) continue to be the primary focus of the Program. The program also has an Airport Awareness component helping to increase knowledge of available services and the importance of an airport to a community's economic growth.

The "Commute-A-Walk" covered walkways, installed at Kalamazoo/Battle Creek International Airport as a test program, were warmly embraced by airlines, passengers and airport management. The increased comfort and safety for passenger loading is expected to result in more walkway installations at those airports served by regional airlines.

Increased service was realized at

several Michigan communities during the last year. Northwest Airlink provided additional service at Pellston Regional Airport this summer, with two flights also stopping at Escanaba, Delta County Airport. In October, Midwest Express began daily service from Delta County Airport providing four round trips direct to Milwaukee. Capital City Airport in Lansing, Marquette County Airport, Alpena County Regional, and Chippewa County International in Sault Ste. Marie each received new or improved service.

A Regional Airport Study in northwest lower Michigan was completed this summer which provided a look into the future, allowing us to be prepared for what lies ahead. The study concluded that little benefit would result from a single regional facility, but we should expect commercial air travel demand in the region to double between 1996 and 2015.

A pilot Regional Airline Safety Program was completed this summer focusing on means by which to change the misconceptions toward the safety of the regional airline industry. Materials have been developed which can be adapted for radio, television and print mediums for use in Michigan communities.

LOOKING AHEAD

Finally, as we look forward to 1998 we have reason to be excited and optimistic about the future. Congressional appropriations for airport improvements have increased by 20 percent, to \$1.7 billion nationwide; thanks to recent increases in aircraft manufacturing and new student starts, general aviation appears to be in the midst of a significant revitalization; airline profits are near record levels; and statistics show continuing safety improvements in all segments of aviation. We especially look forward to working closely with our many partners. On behalf of each member of the Michigan Aeronautics Commission and the entire Bureau staff, please accept my most sincere wish for a happy and safe holiday season and new year.



Aviation In-Formation

Michigan Aeronautics Commission director, William E. Gehman, has been elected Chairman of the National Association of State Aviation Officials (NASAO) for 1998. The organization, which represents all fifty states as well as Puerto Rico and Guam, is one of the oldest aviation organizations in the nation. NASAO promotes and funds a wide variety of aviation programs which are designed to ensure uniformity of safety measures, standardize airport regulations, and develop the finest possible national air transportation system. Its members work in partnership with the Federal Aviation Administration and other federal agencies in pursuit of these goals. Michigan will be host state for the 1998 NASAO annual meeting, to be held next September in Grand Rapids.

Four Michigan airports have closed recently. Meanwhile, four new landing facilities have opened. Airports which have been permanently closed

are Almont, Bennington-Lee Field, Gaines-Cole Field, and Wixom-Spencer Field. New Facilities are Cheboygan-Hoffman's; Fife Lake Seaplane Base, New Lothrop-Bean Blossom, and Williamston-Rooftop Landing Heliport. These changes will be reflected in the *1998 Michigan Airport Directory*, which will be published in March.

The National Council for Women in Aviation (NCWA) has announced its 1997 scholarship winners. Mary K. Plevnia, of Ypsilanti, is one of three recipients nationwide. Ms. Plevnia is a commercial pilot, employed as a first officer with Reliant Airlines. She will use the scholarship toward an Airline Transport Pilot certificate. NCWA was established to expand opportunities for women in all facets of aviation and aerospace. The membership is composed of men and women interested in aviation and aerospace both as a career and as an avocation. For additional information, please contact NCWA at 800-727-6292 or via e-mail at pknight@ncwa.com.

The 1998 Airport Engineering Conference will be held in Lansing at the Holiday Inn South on February 17 and 18. The conference, which is open to the public, will feature

sessions and vendor displays on airport zoning, planning, licensing, safety, as well as technical subjects. The keynote luncheon speaker will be Cecilia Hunziker, Regional Administrator, FAA, Great Lakes Region. Registration fee is \$125, which includes all sessions, meals, and the exhibitor's reception. Additionally, vendors interested in providing displays about their products or services are invited to contact us for details. For additional information or to register, please contact MaryAnn Barrett at 517-335-9958 or via e-mail at barrettm@mdot.state.mi.us.

Kathy Noel, manager of the Chippewa County International Airport in Sault Ste. Marie, has been named 1997 airport manager of the year. This selection was made jointly by the Michigan Association of Airport Executives and the American Association of Airport Executives at their August meeting.



The Greater Detroit Area Chapter of the 99's presents their 3rd annual super safety seminar
Saturday, March 28, 1998 8:30 a.m. - 4:45 p.m. · Oakland Community College, Smith Theatre, Farmington Hills, MI

"Greatest Weather Concerns of Pilots"
Captain Jim Johnson, often referred to as a pilot's meteorologist, is a Delta Airlines Captain and a Consulting Meteorologist in Chicago

"GPS: Magic Box or Pandora's Box"
Cathé Fish, CFII,MEI,
AOPA Air Safety Foundation Lecturer

Registration fee (which includes breakfast and lunch) is \$30 before January 31, and \$40 thereafter. Please register early!

Enclose check or money order payable to: G.D.A.C 99s. Sorry, No Refunds but ticket may be transferable. G.D.A.C. 99s is a non-profit organization, registration fee may qualify as a donation. For additional information please call Nancy Lamers at (248) 347-2957 or peter@rust.net.

NUMBER OF TICKETS _____ AMOUNT ENCLOSED \$